

Amendments to the Claims:

1. (Currently Amended) A method for removing a vapor phase contaminant from a contaminated gas stream in a duct, said method comprising:

- coating fresh sorbent onto a surface of a sorbent structure positioned inside a gas duct;
- passing a contaminated gas stream comprising a vapor-phase contaminant through said gas duct and over said surface of said sorbent structure having said fresh sorbent thereon, without passing said contaminated gas stream through said sorbent structure, so that said vapor phase contaminant is adsorbed by said fresh sorbent until saturated sorbent is produced;
- periodically removing said saturated sorbent from said sorbent structure and collecting said saturated sorbent outside of said gas duct; and
- repeating said coating with a new quantity of fresh sorbent.

B1 2. (Original) The method of Claim 1 wherein said adsorbing additionally comprises: injecting said fresh sorbent into said contaminated gas stream prior to said passing.

3. (Previously Amended) The method of Claim 1 wherein said coating is carried out prior to placing said sorbent structure inside said gas duct.

4. (Original) The method of Claim 1 wherein said vapor-phase contaminant comprises at least one substance containing mercury

5. (Previously Amended) An apparatus for removing a vapor phase contaminant from a contaminated gas stream in a duct, said apparatus comprising:

- at least one sorbent structure;
- a means for coating fresh sorbent onto said sorbent structure;
- a means for passing a contaminated gas over said sorbent structure having said fresh sorbent thereon to produce saturated sorbent; and
- a means for removing and collecting said saturated sorbent.

6. (Previously Added) A method for removing a vapor-phase contaminant from a gas stream, comprising:

coating a non-porous sorbent structure positioned in a gas duct with a sorbent;
passing a gas stream comprising a vapor-phase contaminant through the gas duct;
contacting the vapor-phase contaminant with the sorbent, thereby adsorbing the
vapor-phase contaminant onto the sorbent;
removing the sorbent having the adsorbed vapor-phase contaminant from the gas
duct; and
recoating the non-porous sorbent structure with fresh sorbent.

7. (Previously Added) The method of Claim 6, wherein the coating comprises
attracting the sorbent to the non-porous sorbent structure using an attractive force.

8. (Previously Added) The method of Claim 7, wherein the attracting comprises
attracting the sorbent to the non-porous sorbent structure using an attractive force selected
from the group consisting of electrostatic attraction, magnetic attraction, gravitational
attraction, van der Waals attraction, and combinations thereof.

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9. (Previously Added) The method of Claim 6, wherein the coating comprises
magnetically attracting the sorbent to the non-porous sorbent structure.

10. (Previously Added) The method of Claim 9, wherein the removing comprises
demagnetizing the sorbent and the sorbent structure.

11. (Previously Added) The method of Claim 6, wherein the non-porous sorbent
structure is selected from the group consisting of tubes, plates, monoliths, walls, vanes and
combinations thereof.

12. (Previously Added) The method of Claim 6, wherein the vapor-phase
contaminant comprises mercury.

13. (Previously Added) The method of Claim 6, wherein the recoating comprises
attracting the fresh sorbent to the non-porous sorbent structure using an attractive force
selected from the group consisting of electrostatic attraction, magnetic attraction,
gravitational attraction, van der Waals attraction, and combinations thereof.

14. (Previously Added) The method of Claim 6, wherein the recoating comprises:
removing the non-porous sorbent structure from the gas duct;
applying the fresh sorbent to the non-porous sorbent structure; and
repositioning the non-porous sorbent structure in the gas duct.

15. (Previously Added) The method of Claim 6, wherein the recoating comprises
recoating the non-porous sorbent structure with the fresh sorbent while the non-porous
sorbent structure remains in the gas duct.

16. (Previously Added) A method for removing a vapor-phase contaminant from a
gas stream, comprising:

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- coating a sorbent structure positioned in a gas duct with a sorbent, wherein the coating
comprises magnetically attracting the sorbent to the sorbent structure;
- passing a gas stream comprising a vapor-phase contaminant through the gas duct;
- contacting the vapor-phase contaminant with the sorbent, thereby adsorbing the
vapor-phase contaminant onto the sorbent;
- removing the sorbent having the adsorbed vapor-phase contaminant from the gas
duct; and
- repeating the coating with fresh sorbent.

17. (Currently Amended) An apparatus for removing a vapor-phase contaminant
from a gas stream, comprising:

- a gas duct;
- a magnetized sorbent structure positioned in said gas duct; and
- a sorbent attached to said magnetized sorbent structure,

wherein said magnetized sorbent structure is configured to be periodically
[demagnetized] demagnetized, thereby allowing said sorbent to become detached from said
magnetized sorbent structure.

18. (New) A method for removing a vapor-phase contaminant from a gas stream,
comprising:

passing a gas stream comprising a vapor-phase contaminant through a gas duct having a first end and a second end and having a sorbent structure comprising a sorbent disposed within the gas duct between the first end and the second end, wherein at least a portion of the gas stream passes from the first end to the second end without passing through the sorbent structure;

contacting the vapor-phase contaminant with the sorbent, whereby the vapor phase contaminant is adsorbed by the sorbent to produce saturated sorbent;

periodically removing the saturated sorbent from the sorbent structure; and

coating the sorbent structure with fresh sorbent.

19. (New) The method of Claim 18, wherein the sorbent structure is selected from the group consisting of tubes, plates, monoliths, walls, vanes and combinations thereof.

20. (New) The method of Claim 18, wherein the vapor-phase contaminant comprises mercury.

21. (New) The method of Claim 18, wherein said coating comprises attracting the sorbent to the sorbent structure using an attractive force.

22. (New) The method of Claim 21, wherein said attracting comprises attracting the sorbent to the sorbent structure using an attractive force selected from the group consisting of electrostatic attraction, magnetic attraction, gravitational attraction, van der Waals attraction, and combinations thereof.

23. (New) The method of Claim 18, wherein said coating comprises magnetically attracting the sorbent to the sorbent structure.

24. (New) The method of Claim 23, wherein said periodically removing comprises demagnetizing the sorbent and the sorbent structure.

25. (New) The method of Claim 18, wherein said coating comprises:

removing the sorbent structure from the gas duct;

applying the fresh sorbent to the sorbent structure; and

repositioning the non-porous sorbent structure in the gas duct.

26. (New) The method of Claim 18, wherein said coating comprises coating the sorbent structure with the fresh sorbent while the sorbent structure remains in the gas duct.

27. (New) The method of Claim 26, wherein said coating comprises injecting the fresh sorbent into the gas duct upstream of the sorbent structure.

28. (New) An apparatus for removing a vapor-phase contaminant from a gas stream, comprising:

a gas duct having a first end and a second end;

a sorbent structure comprising a sorbent disposed within the gas duct between the first end and the second end, wherein at least a portion of a gas stream may pass from the first end to the second end without passing through the sorbent structure;

means for injecting fresh sorbent upstream of the sorbent structure attached to the gas duct; and

means for periodically removing saturated sorbent from the sorbent structure.
